

IN THE CLAIMS:

1. **(Original)** A semiconductor device comprising:
a first substrate;
a second substrate; and
a plurality of columnar spacers disposed between said first substrate and said second substrate and maintaining an interval between said first substrate and second substrate, each of said columnar spacers having at least an upper surface, a side surface, and an edge between said upper surface and said side surface, wherein said upper surface faces a surface of said second substrate, and
an alignment film which covers said columnar spacers
wherein a radius R of curvature of said edge is 2 μm or less.
2. **(Original)** A semiconductor device according to claim 1, wherein each of said columnar spacers comprises a flat surface at said upper surface.
3. **(Original)** A semiconductor device according to claim 1, wherein a sectional shape of each of said columnar spacers in a radial direction is one selected from said group consisting of a circle, an ellipse, a triangle, a quadrilateral, and a polygon having sides more than said former.
4. **(Original)** A semiconductor device according to claim 1, wherein each of said columnar spacers comprises an insulating material.
5. **(Original)** A semiconductor device according to claim 1, wherein each of said columnar spacers is formed over a contact portion where a thin film transistor and a pixel electrode are connected to each other.
6. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed only at a sealing region.

7. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at a sealing region and a pixel portion.

8. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at a sealing region and a region between a driver circuit and a pixel portion.

9. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at a region between a driver circuit and a pixel portion and at said pixel portion.

10. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at a region between a sealing region and a pixel portion.

11. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at a region between a sealing region and a driver circuit.

12. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at a region between a sealing region and an end portion of said substrate.

13. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are formed at all regions of said substrate.

14. **(Original)** A semiconductor device according to claim 1, wherein said columnar spacers are covered with an alignment film, and a pretilt angle of a liquid crystal is 6° to 10°.

15. **(Original)** A semiconductor device according to claim 1, wherein said semiconductor device is an active matrix type liquid crystal display device.

16. **(Original)** A semiconductor device according to claim 1, wherein said semiconductor device is at least one selected from the group consisting of a video camera, a

digital camera, a projector, a goggle type display, a car navigation system, a personal computer, and a portable information terminal.

17. **(Currently Amended)** A semiconductor device according to claim 1, ~~comprising:~~
wherein a height of said columnar spacer is 10 μm or less.

18. **(Original)** A semiconductor device according to claim 1:
wherein a width of said columnar spacer is 20 μm or less.

19. **(Original)** A semiconductor device according to claim 1:
wherein an angle between a tangent plane at a center of a side of said columnar spacer and a substrate surface is 65° to 115°.

20. **(Original)** A semiconductor device according to claim 1:
wherein a height of said columnar spacer is 10 μm or less, and a width of said columnar spacer is 20 μm or less.

21. **(Original)** A semiconductor device according to claim 1:
wherein a height of said columnar spacer is 10 μm or less, and an angle between a tangent plane at a center of a side of said columnar spacer and a substrate surface is 65° to 115°.

22. **(Original)** A semiconductor device according to claim 1:
wherein a width of said columnar spacer is 20 μm or less, and an angle between a tangent plane at a center of a side of said columnar spacer and a substrate surface is 65° to 115°.

23. **(Original)** A semiconductor device comprising:
a first substrate;
a second substrate;

a plurality of columnar spacers disposed between said first substrate and said second substrate, each of said columnar spacers having at least an upper surface, a side surface, and an edge between said upper surface and said side surface, wherein said upper surface faces a surface of said second substrate, and

an alignment film below said columnar spacers,

wherein a radius R of curvature of said edge is 2 μm or less.

24. **(Original)** A semiconductor device according to claim 23, wherein each of said columnar spacers comprises a flat surface at said upper surface.

25. **(Original)** A semiconductor device according to claim 23, wherein a sectional shape of each of said columnar spacers in a radial direction is one selected from said group consisting of a circle, an ellipse, a triangle, a quadrilateral, and a polygon having sides more than said former.

26. **(Original)** A semiconductor device according to claim 23, wherein each of said columnar spacers comprises an insulating material.

27. **(Original)** A semiconductor device according to claim 23, wherein each of said columnar spacers is formed over a contact portion where a thin film transistor and a pixel electrode are connected to each other.

28. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed only at a sealing region.

29. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at a sealing region and a pixel portion.

30. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at a sealing region and a region between a driver circuit and a pixel portion.

31. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at a region between a driver circuit and a pixel portion and at said pixel portion.

32. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at a region between a sealing region and a pixel portion.

33. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at a region between a sealing region and a driver circuit.

34. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at a region between a sealing region and an end portion of said substrate.

35. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are formed at all regions of said substrate.

36. **(Original)** A semiconductor device according to claim 23, wherein said columnar spacers are covered with an alignment film, and a pretilt angle of a liquid crystal is 6° to 10°.

37. **(Original)** A semiconductor device according to claim 23, wherein said semiconductor device is an active matrix type liquid crystal display device.

38. **(Original)** A semiconductor device according to claim 23, wherein said semiconductor device is at least one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer, and a portable information terminal.

39. **(Currently Amended)** A semiconductor device according to claim 23,
~~comprising:~~

wherein a height of said columnar spacer is 10 μm or less.

40. **(Original)** A semiconductor device according to claim 23:

wherein a width of said columnar spacer is 20 μm or less.

41. **(Original)** A semiconductor device according to claim 23:

wherein an angle between a tangent plane at a center of a side of said columnar spacer
and a substrate surface is 65° to 115° .

42. **(Original)** A semiconductor device according to claim 23:

wherein a height of said columnar spacer is 10 μm or less, and a width of said
columnar spacer is 20 μm or less.

43. **(Original)** A semiconductor device according to claim 23:

wherein a height of said columnar spacer is 10 μm or less, and an angle between a
tangent plane at a center of a side of said columnar spacer and a substrate surface is 65° to
 115° .

44. **(Original)** A semiconductor device according to claim 23:

wherein a width of said columnar spacer is 20 μm or less, and an angle between a
tangent plane at a center of a side of said columnar spacer and a substrate surface is 65° to
 115° .

45-49. **(Cancelled)**

50. **(Original)** A semiconductor device comprising:

a thin film transistor over a first substrate;

a pixel electrode electrically connected to said thin film transistor;

an alignment film over the pixel electrode;
a columnar spacer over said alignment film, said columnar spacer having at least an upper surface, a side surface, and an edge between said upper surface and said side surface, wherein said upper surface faces a surface of said second substrate and a radius R of curvature of said edge is 2 μm or less; and
a light-shielding film provided over said second substrate,
wherein said columnar spacer is located below said light-shielding film.

51. **(Original)** A semiconductor device according to claim 50 wherein said columnar spacer has a flat surface at said upper surface.

52. **(Original)** A semiconductor device according to claim 50 wherein said columnar spacer comprises an insulating material.

53. **(Original)** A semiconductor device according to claim 50 wherein said semiconductor device is an active matrix type liquid crystal display device.

54. **(Original)** A semiconductor device according to claim 50 wherein said semiconductor device is at least one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer, and a portable information terminal.

55. **(Currently Amended)** A semiconductor device comprising:
a thin film transistor over a first substrate;
a pixel electrode electrically connected to said thin film transistor in a contact hole;
an alignment film over said pixel electrode;

a columnar spacer over said alignment film, ~~on~~ said columnar spacer overlapping said contact hole, ~~said columnar spacer~~ and having at least an upper surface, a side surface, and an edge between said upper surface and said side surface, wherein said upper surface faces a surface of said second substrate and a radius R of curvature of said edge is 2 μm or less; and a light-shielding film provided over said second substrate, wherein said columnar spacer is located below said light-shielding film.

56. **(Original)** A semiconductor device according to claim 55 wherein said columnar spacer has a flat surface at said upper surface.

57. **(Original)** A semiconductor device according to claim 55 wherein said columnar spacer comprises an insulating material.

58. **(Original)** A semiconductor device according to claim 55 wherein said semiconductor device is an active matrix type liquid crystal display device.

59. **(Original)** A semiconductor device according to claim 55 wherein said semiconductor device is at least one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer, and a portable information terminal.

60. **(Original)** A semiconductor device comprising:
a thin film transistor over a first substrate;
a pixel electrode electrically connected to said thin film transistor;
a columnar spacer over said first substrate, said columnar spacer having at least an upper surface, a side surface, and an edge between said upper surface and said side surface, wherein said upper surface faces a surface of said second substrate and a radius R of curvature of said edge is 2 μm or less;
an alignment film which covers said columnar spacer; and
a light-shielding film provided over said second substrate,
wherein said columnar spacer is located below said light-shielding film.

61. **(Original)** A semiconductor device according to claim 60 wherein said columnar spacer has a flat surface at said upper surface.

62. **(Original)** A semiconductor device according to claim 60 wherein said columnar spacer comprises an insulating material.

63. **(Original)** A semiconductor device according to claim 60 wherein said semiconductor device is an active matrix type liquid crystal display device.

64. **(Original)** A semiconductor device according to claim 60 wherein said semiconductor device is at least one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer, and a portable information terminal.

65. **(Original)** A semiconductor device comprising:
a thin film transistor over a first substrate;
a pixel electrode electrically connected to said thin film transistor in a contact hole;
a columnar spacer on said contact hole, said columnar spacer having at least an upper surface, a side surface, and an edge between said upper surface and said side surface, wherein said upper surface faces a surface of said second substrate and a radius R of curvature of said edge is 2 μm or less;
an alignment film which covers said columnar spacer; and
a light-shielding film provided over said second substrate,
wherein said columnar spacer is located below said light-shielding film.

66. **(Original)** A semiconductor device according to claim 65 wherein said columnar spacer has a flat surface at said upper surface.

67. **(Original)** A semiconductor device according to claim 65 wherein said columnar spacer comprises an insulating material.

68. **(Original)** A semiconductor device according to claim 65 wherein said semiconductor device is an active matrix type liquid crystal display device.

69. **(Original)** A semiconductor device according to claim 65 wherein said semiconductor device is at least one selected from the group consisting of a video camera, a digital camera, a projector, a goggle type display, a car navigation system, a personal computer, and a portable information terminal.